UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
SHIN, KYUNG H

ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/964,232	GRIB ET AL.
	Examiner	Art Unit	
	Kyung H. Shin	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>29 January 2006</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-29</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-29</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Claims **1 - 29** are pending. Claims **1, 15, 16, 21** have been amended. Independent claims are **1, 16, 21**.

Response to Arguments

2. Applicant's arguments filed 7/26/2006 have been fully considered but they are not persuasive.

   2.1 Applicant argues that the referenced prior art does not disclose " ... the cited references fails to show testing over multiple paths between two devices as recited by independent claims 1, 15, 16, and 21 ... ". (see Remarks Page 12, Lines 3-4) ; " ... a first path ... a second path ... ". *(see Remarks Page 12, Lines 9-12) ; (see Remarks Page 12, Line 19 and Line 22) ; (see Remarks Page 13, Line 3 and Line 6)*

   A path between two devices is defined as a connection, and the path between two devices is defined as a route. The Mayton (6,763,380) prior art discloses wherein testing over multiple paths between two devices. (see Mayton col. 3, lines 25-32: one or more routes (i.e. a first and a second communications path) for each connection; col. 3, lines 48-50: tests are performed using one or more routes for each communication connection)

2.2   Applicant argues that the referenced prior art does not disclose " ...

performance tests are performed simultaneously ... ". (see Remarks Page 15,

Line 3 and Line 8)

A computer system with a processor can only execute one instruction at a

time. Therefore, a computer can one do one action at a time.   It is not

possible to start two tests at the same instantaneous point in time, if this is

Applicant's definition of simultaneous.   Even though, from a human

perspective, it appears that a computer system can perform multiple actions at

the same time. In actuality, only one action at a time can be performed.

In addition, the Mayton (6,763,380) prior art discloses the capability to perform

tests on a scheduled (see Mayton col. 3, lines 22-24), and on a non-scheduled

basis (see Mayton col. 13, lines 30-32).   Also, Mayton discloses the capability

for both, passive testing, active testing, and user initiated performance tests.

(see Mayton col. 3, lines 24-25; col. 13, lines 30-32)   Claims 3, 4, 6 - 14, 19,

20, 23, 24, 27, 29, 29 of the applicant's invention are based on a scheduling

capability for the completion of performance tests.   Therefore, the applicant's

invention discloses the capability to complete performance tests

simultaneously (i.e. on a non-schedule basis or performed using an extremely

short time period or at user initiation), and to complete performance tests

based upon a schedule.   These particular functions are equivalent between

the referenced prior art and the applicant's invention.

The examiner must again state that performance tests completed utilizing an

extremely short time period are considered to be simultaneous, and that the

tests are performed essentially simultaneously.   In addition, performance tests

completed utilizing user initiation can be performed essentially simultaneously,

since initiation can be performed simultaneously.

2.3   Applicant argues that the referenced prior art does not disclose proper

obviousness rejections. (see Remarks Pages 16 and Page 17)

The referenced prior art and its obviousness combinations of Mayton and

Silva, plus Mayton and Zhuo, clearly state the advantages achieved from each

combination, which is the motivation for the combination.   The Mayton and

Silva prior art combination discloses an authorization capability for the

completion of performance tests.   The Mayton and Zhuo prior art combination

discloses a capability to process time conflicts within a performance test

scheduling system.   The specific motivation for the combination is stated in

the referenced prior art and indicated by a citation.   The above stated functions

performed by the applicant's invention are well known in the art, and would be

obvious functions to anyone knowledgeable in the art.   The requirements for a

case of obviousness have been satisfied.

The test for obviousness is not whether the features of a secondary reference

may be bodily incorporated into the structure of the primary reference; nor is it

that the claimed invention must be expressly suggested in any one or all of the

references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Furthermore, in response to applicant's arguments against the reference individually, one cannot show nonobviousness by attacking references individually where rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

2.4 The examiner has considered the applicant's remarks concerning the performance measurement of network routes.   Applicant's arguments have been fully analyzed and considered but they are not persuasive.
After an additional analysis of the applicant's invention, remarks, and a search of the available prior art, it was determined that the current set of prior art consisting of Mayton (6,763,380), Silva (6,360,268), and Zhuo (20030036865) disclose the applicant's invention including disclosures in Remarks dated July 26, 2006.

Claim Rejection - 35 USC § 102

3. **Claims 1 - 9, 13, 15 - 29** are rejected under 35 U.S.C. 102(e) as being anticipated by **Mayton et al.** (US Patent No. 6,763,380).

Regarding Claim 1, Mayton discloses a method performed by one or more

components in a network comprising a plurality of paths between a first device and a

second device, the method comprising:

a) conducting a first performance test of a first type (see Mayton col. 4, lines 26-28;

col. 14, lines 7-11: communication types (i.e. a first type)) over a first path of the

plurality of paths between the first and second devices; (see Mayton col. 3, line

66 - col. 4, line 5; col. 3, lines 48-54: network performance measurement test (i.e.

a first test) for a route (i.e. a first path) from a plurality of routes (i.e. paths)

between two network devices (i.e. a first and a second device)) and (see Mayton

col. 3, lines 28-29: complete performance test for each connection at same time

(i.e. simultaneously) ; col. 13, lines 30-32: user initiated tests, non-scheduled

test, simultaneously)

b) conducting a second performance test of the first type (see Mayton col. 4, lines

26-28; col. 14, lines 7-11: communication types (i.e. a first type)) over a second

path of the plurality of paths between the first and second devices; (see Mayton

col. 4, lines 5-9; col. 3, line 66 - col. 4, line 5; col. 3, lines 48-54: network

performance test for a second route (i.e. a second path) between two network

devices (i.e. a first and a second device)) and (see Mayton col. 3, lines 28-29:

complete performance test for each connection at same time (i.e.

simultaneously) ; col. 13, lines 30-32: user initiated tests, non-scheduled test,

simultaneously)

c) wherein the first and the second performance tests are performed

simultaneously. (see Mayton col. 3, lines 22-24: performance measurement tests

completed on a scheduled basis (i.e. tests scheduled within close time

proximity)) and (see Mayton col. 3, lines 28-29: complete performance test for

each connection at same time (i.e. simultaneously) ; col. 13, lines 30-32: user

initiated tests, non-scheduled test, simultaneously)

Regarding Claims 2, 17, Mayton discloses the method of claims 1, 16, wherein the first

performance test produces a first set of results;

a) wherein the second performance test produces a second set of results; (see

Mayton col. 3, lines 25-32: results are generated for multiple (first and second

network devices) over multiple routings (paths)) and

b) further comprising presenting a service level performance comparison based on

the first and second sets of results. (see Mayton col. 3, lines 40-46: performance

factors (service level) such as poor performance from latency or communication

outages)

Regarding Claim 3, Mayton discloses the method of claim 2, wherein the first

performance test includes a plurality of first individual performance tests performed over

an extended time duration; and the second performance test includes a plurality of

second individual performance tests performed over the extended time duration. (see

Mayton col. 3, lines 22-32; col. 3, lines 58-65: perform periodic repeated tests over a

multitude of routings (paths) between two network devices over an extended time

period)

Regarding Claim 4, Mayton discloses the method of claim 3, wherein each of the

pluralities of first and second individual performance tests are performed at roughly

periodic intervals over the extended time duration. (see Mayton col. 3, lines 25-32: tests

are performed at periodic intervals)

Regarding Claims 5, 18, Mayton discloses the method of claims 1, 16, wherein the first

path transverses a first access network, a first transport network, and a second access

network; and the second path transverses the first access network, a second transport

network, and the second access network. (see Mayton col. 8, lines 57-63: multiple

transport protocols (TCP and RTP) utilized in generating performance test data)

Regarding Claims 6, 19, 24, 27, Mayton discloses the method of claims 1, 16, 23,

further comprising receiving a scheduling request representing the first and second

performance tests. (see Mayton col. 3, lines 16-22: perform tests based on a

schedule)

Regarding Claim 7, Mayton discloses the method of claim 6, wherein the scheduling

request is received by a scheduling system; and the scheduling system communicates

a first indication of the request to the first device. (see Mayton col. 11, lines 34-40: test

scheduler communicates schedule information to endpoint nodes (first and second

network devices))

Regarding Claim 8, Mayton discloses the method of claim 7, wherein the scheduling

system further communicated a second indication of the request to the second device.

(see Mayton col. 11, lines 34-40: test scheduler communicates schedule information to

endpoint nodes (first and second network devices))

Regarding Claims 9, 20, Mayton discloses the method of claims 6, 19, further

comprising scheduling the first and second performance tests based on the scheduling

request and a random time component. (see Mayton col. 14, lines 49-52; col. 8, lines

52-57: tests are performed at random based on exception events)

Regarding Claim 13, Mayton discloses the method of claim 6, further comprising

determining whether a number of scheduled tests exceeds a first threshold number for

the first device or exceeds a second threshold number for the second device. (see

Mayton col. 6, line 66 - col. 7, line 3: threshold values are utilized)

Regarding Claim 15, Mayton discloses a computer readable medium containing

computer executable instructions for performing a method by steps comprising: (see

Mayton col. 5, lines 6-18: performance test system can be implemented as computer

program product)

a) conducting a first performance test of a first type over a first path of a plurality of

    paths between a first and second devices; (see Mayton col. 3, line 66 - col. 4, line

    5; col. 3, lines 48-54: network performance measurement test (i.e. a first test) for

    a route (i.e. a first path) from a plurality of routes (i.e. paths) between two

    network devices (i.e. a first and a second device)) and (see Mayton col. 3, lines

    28-29: complete performance test for each connection at same time (i.e.

    simultaneously) ; col. 13, lines 30-32: user initiated tests, non-scheduled test,

    substantially simultaneously)

b) conducting a second performance test of the first type over a second path of the

    plurality of paths between the first and second devices; (see Mayton col. 3, line

    66 - col. 4, line 5; col. 3, lines 48-54: network performance measurement test (i.e.

    a first test) for a route (i.e. a first path) from a plurality of routes (i.e. paths)

    between two network devices (i.e. a first and a second device)) and (see Mayton

    col. 3, lines 28-29: complete performance test for each connection at same time

    (i.e. simultaneously) ; col. 13, lines 30-32: user initiated tests, non-scheduled

    test, substantially simultaneously) and

c) wherein the first and the second performance tests are performed

    simultaneously. (see Mayton col. 3, line 66 - col. 4, line 5; col. 3, lines 48-54:

    network performance measurement test (i.e. a first test) for a route (i.e. a first

    path) from a plurality of routes (i.e. paths) between two network devices (i.e. a

    first and a second device)) and (see Mayton col. 3, lines 28-29: complete

performance test for each connection at same time (i.e. simultaneously) ; col. 13,

lines 30-32: user initiated tests, non-scheduled test, substantially simultaneously)

Regarding Claims 16, Mayton discloses a network comprising:

a) a plurality of paths between a first device and a second device; (see Mayton col.

3, lines 25-27: multiple paths)

b) means for conducting a first performance test of a first type (see Mayton col. 4,

lines 26-28; col. 14, lines 7-11: communication types (i.e. a first type)) over a first

path of the plurality of paths between the first and second devices; (see Mayton

col. 3, line 66 - col. 4, line 5; col. 3, lines 48-54: network performance

measurement test (i.e. a first test) for a route (i.e. a first path) from a plurality of

routes (i.e. paths) between two network devices (i.e. a first and a second

device)) and (see Mayton col. 3, lines 28-29: complete performance test for each

connection at same time (i.e. simultaneously) ; col. 13, lines 30-32: user initiated

tests, non-scheduled test, substantially simultaneously)

c) means for conducting a second performance test of the first type (see Mayton

col. 4, lines 26-28; col. 14, lines 7-11: communication types (i.e. a first type)) over

a second path of the plurality of paths between the first and second devices; (see

Mayton col. 4, lines 5-9; col. 3, line 66 - col. 4, line 5; col. 3, lines 48-54: network

performance test for a second route (i.e. a second path) between two network

devices (i.e. a first and a second device)) and (see Mayton col. 3, lines 28-29:

complete performance test for each connection at same time (i.e.

simultaneously) ; col. 13, lines 30-32: user initiated tests, non-scheduled test,

substantially simultaneously)

d) wherein the first and the second performance tests are performed

simultaneously. (see Mayton col. 3, lines 22-24: performance measurement tests

completed on a scheduled basis (i.e. tests scheduled within close time

proximity)) and (see Mayton col. 3, lines 28-29: complete performance test for

each connection at same time (i.e. simultaneously) ; col. 13, lines 30-32: user

initiated tests, non-scheduled test, substantially simultaneously)

Regarding Claim 21, Mayton discloses a network comprising:

a) a first device coupled to a first access network; <u>the</u> first access network coupled

to a first and a second transport networks; (see col. 9, lines 38-41; col. 8, lines

62-63: one or more transport protocols (i.e. TCP, UDP, RTP) utilized for network

communications)

b) a second access network coupled to the first and the second transport networks;

(see col. 9, lines 38-41; col. 8, lines 62-63: one or more transport protocols (i.e.

TCP, UDP, RTP) utilized for network communications) and

c) a second device coupled to the second access network; wherein a performance

test is conducted between the first device and the second device over each of

the first and second transport networks simultaneously. (see col. 3, line 66 - col.

4, line 5; col. 3, lines 48-54: network performance measurements for one or more

paths (i.e. communications utilizing one or more transport paths) between two

network devices) and (see Mayton col. 3, lines 28-29: complete performance test

for each connection at same time (i.e. simultaneously) ; col. 13, lines 30-32: user

initiated tests, non-scheduled test, substantially simultaneously)

Regarding Claim 22, Mayton discloses the network of claim 21, wherein the first device

is coupled to a first router, wherein the first router selectively routes performance testing

packets received from the first device over a first path to the first transport network and

a second path to the second transport network. (see col. 8, lines 57-63: communications

implemented utilizing multiple transport protocols (TCP and RTP))

Regarding Claim 23, Mayton discloses the network of claim 21, further comprising a

performance test scheduler. (see col. 11, lines 34-40: test scheduler coordinates

performance testing)

Regarding Claim 25, Mayton discloses the network of claim 24, further comprising a

results collector for receiving a set of results associated with the performance test. (see

col. 6, lines 6-12; col. 6, lines 21-24: performance data stored)

Regarding Claim 26, Mayton discloses the network of claim 25, wherein the results

collector transmits at least a subset of the set of results to the client device. (see col. 8,

lines 32-35: endpoint nodes (client: network devices) analyze performance data)

Regarding Claim 28, Mayton discloses the network of claim 27, wherein the

performance test scheduler communicates a second scheduling instruction associated

with the performance test to the second device. (see col. 3, lines 16-22: scheduling

information transmitted to endpoint nodes (first and second network devices)

Regarding Claim 29, Mayton discloses the network of claim 28, wherein the second

device includes a test mode; and wherein the second device enters the test mode in

response to receiving the second scheduling instruction. (see col. 3, lines 16-22: second

network devices used in generation of performance data)

Claim Rejection - 35 USC § 103

4.   Claims **10, 11, 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Mayton in view of **Silva** (US Patent No. 6,360,268).

Regarding Claim 10, Mayton discloses a performance test scheduler between a first

and second network device. (see Mayton col. 3, line 66 - col. 4, line 9) Mayton does not

disclose the capability to determined whether the scheduling request is authorized.

However, Silva discloses the method of claim 6, further comprising determining whether

the scheduling request is authorized. (see Silva col. 7, lines 10-14: determine if user has

permission to perform test)

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify Mayton to determine whether a scheduling request was

authorized as taught by Silva. One of ordinary skill in the art would be motivated to

employ Silva in order to maximize efficiency for test scheduling in the generation of

network communication performance metrics. (see Silva col. 1, lines 44-48: " ...

maximize efficiency in the handling of test scheduling and test execution ... automate ...

testing by using a server to manage test machines and to allocate test packages ... in

accordance with a schedule ... ")

Regarding Claim 11, Mayton discloses a performance test scheduler between a first

and second network device. Mayton does not disclose the capability to determined

whether the scheduling request is not authorized. However, Silva discloses the method

of claim 10, further comprising indicating that the scheduling request is not authorized.

(see Silva col. 7, lines 10-14; col. 12, lines 38-47: determine if user has permission to

perform test)

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify Mayton to indicate whether a scheduling request was not

authorized as taught by Silva. One of ordinary skill in the art would be motivated to

employ Silva in order to maximize efficiency for test scheduling in the generation of

network communication performance metrics. (see Silva col. 1, lines 44-48)

Regarding Claim 14, Mayton discloses a performance test scheduler between a first

and second network device. Mayton does not disclose the capability to indicate a failed

scheduling request. However, Silva discloses the method of claim 13, further

comprising indicating a failed scheduling request. (see Silva col. 7, lines 10-14; col. 12,

lines 38-47: determine if user has permission to perform test)

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify Mayton to indicate a failed scheduling request as taught

by Silva. One of ordinary skill in the art would be motivated to employ Silva in order to

maximize efficiency for test scheduling in the generation of network communication

performance metrics. (see Silva col. 1, lines 44-48)

5.   Claims **12** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Mayton**

in view of **Zhuo** (US Patent No. 20030036865).

Regarding Claim 12, Mayton discloses the method of claim 6, further comprising

determining whether the scheduling request conflicts with a second scheduling request.

(see Zhuo paragraph [0063], lines 14-27: test parameters for scheduling request in

conflict)

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify Mayton to determine test scheduling conflicts as taught

by Zhuo. One of ordinary skill in the art would be motivated to employ Zhuo in order to

optimize the efficient coordination for test scheduling in the generation of network

communications performance metrics. (see Zhuo paragraph [0007], lines 9-11: " ...

methods and systems for timely and efficient coordination and conduct of remote

equipment tests would be desirable ... ")

Conclusion

6.   THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Kyung H. Shin whose telephone number is (571) 272-

3920. The examiner can normally be reached on 9:30 am - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.
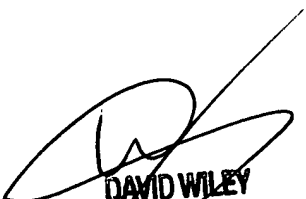
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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Κ Η S
Kyung H Shin
Patent Examiner
Art Unit 2143

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KHS
October 11, 2006

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